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March 22, 2004

Charles F. Keene
Executive Officer, California Desalination Task Force
State of California
Department of Water Resources
770 Fairmont Avenue, Suite 102
Glendale, CA 91203

Dear Charles:

I was pleased to hear you were able to meet my District Director, Inez Gonzalez, at the San Diego scoping meeting for the Salton Sea Ecosystem Restoration Project.

I'm very interested in following this project's progress, and I would appreciate you keeping me informed as you move forward.

Best wishes.

Sincerely,

BOB FILNER
Member of Congress

BF/ig
2147641



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Palm Springs-South Coast Field Office

690 West Garnet Avenue

P.O. Box 581260

North Palm Springs, CA 92258-1260



*Visit us on the Internet at
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In Reply Refer To:
CA660.03
1610

MAR 12 2004

Charles Keene
California Department of Water Resources
770 Fairmont Avenue
Glendale, California 91203

Dear Mr. Keene:

Thank you for contacting the Bureau of Land Management (BLM) about the preparation of a programmatic environmental impact report for the Restoration of the Salton Sea Ecosystem. The BLM manages public land around the shore of the Salton Sea and in the vicinity of the project area, including Palen Dry Lake. The Palm Springs-South Coast Field Office is responsible for public lands in Riverside County, while the El Centro Field Office covers the public lands in Imperial County. These public lands are managed under the California Desert Conservation Area (CDCA) Plan, as amended (1980). Recent amendments to the CDCA Plan include the Northern and Eastern Colorado Desert Coordinated Management Plan (2002), and the Coachella Valley Plan (2002). These plans identify important natural and cultural resources, land uses, routes of travel, rights of ways, and other issues relevant to the proposed Restoration of the Salton Sea Ecosystem. The BLM is particularly interested in possible impacts from the proposed project to water sources and hydrology, threatened and endangered species, public access and recreation, and cultural resources.

Please indicate the boundaries of public lands on any appropriate maps prepared for the EIR, and consider any impacts to the resources of these lands in the analysis of the project.

For further information, or to receive copies of BLM planning documents, please contact me at (760) 251-4840, or by e-mail at gchill@ca.blm.gov.

Sincerely,

Greg Hill
Planning and Environmental Coordinator



IN REPLY REFER TO:

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825

APR 12 2004

Charles Keene
California Department of Water Resources
770 Fairmont Avenue
Glendale, CA 91203

Dear Mr. Keene:

We are providing scoping comments in response to the Notice of Preparation on the Salton Sea Ecosystem Restoration Project and the Programmatic Environmental Impact Report being produced by the Department of Water Resources and the California Department of Fish and Game. The Pacific Regional Office of the Bureau of Indian Affairs has been following various proposals for the restoration and protection of the Salton Sea with intense interest for a number of years and previously provided detailed comments on the Environmental Impact Statement produced by the Bureau of Reclamation. Our concerns remain regarding the protection of Indian trust assets and we believe that this issue needs to be fully explored and disclosed in the proposed EIR. We also note that the Mary Bono Concept Plan is strongly supported by the Torres Martinez Band of Desert Cahuilla Indians. Accordingly, we believe that the Mary Bono Concept Plan needs to be fully explored as an alternative in the EIR, allowing potential selection and implementation.

We look forward to reviewing results of scoping documentation informing the public as to the significant issues and alternatives to be discussed in the EIR. If you have any questions, our contacts for this matter are William Allan, Environmental Protection Specialist, at (916) 978-6043, and Christopher Reeves, Regional Geohydrologist, at (916) 978-6040.

Sincerely,

Acting Regional Director

cc: Superintendent, Southern California Agency, BIA



UNITED STATES
DEPARTMENT OF THE INTERIOR

IN REPLY REFER TO:

Natural Resources
FY 2004 Water

BUREAU OF INDIAN AFFAIRS
SOUTHERN CALIFORNIA AGENCY
2038 IOWA AVENUE, SUITE 101
RIVERSIDE, CALIFORNIA 92507-2471
PHONE (909) 276-6624 FAX (909) 276-6641

APR 16 2004

Charles Keene, Principal Environmental Manager
PEIR Coordinator, Colorado River and Salton Sea Office
California Department of Water Resources
770 Fairmount Avenue
Glendale, CA 91203

Dear Mr. Keene:

This serves as comment regarding the Department of Water resources (DWR) Notice of Preparation (NOP) for the Salton Sea Restoration Programmatic Environmental Impact Report (PEIR). In accordance with the NOP we are submitting the recommendations below for material to be included in your draft PEIR

DWR should fully address and clarify the structure and purpose of the California Resources Secretary's Salton Sea Advisory Committee.

DWR must consider and address tribal concerns about restoration alternatives for the Salton Sea.

DWR should address and fully describe the format of how restoration alternatives will impact Tribal and federal lands and future land use.

DWR should address impacts on lands and communities around the water-body. There will be land use changes, and there is great concern about impacts to economic development.

DWR should address impacts in each alternative regarding the five basic areas (objectives) listed, as follow:

- 1) Maintain a nearly constant level of the inland body of water;
- 2) Maintain an economic sport fishery;
- 3) Maintain habitat for migratory birds;
- 4) Water quality goals for improvement; and,
- 5) Maintain Agriculture's position

DWR should fully describe the long term (greater than 100 years) impacts for all alternatives concerning the above 5 objectives.

The DWR task must address: 1) Sustain avian biodiversity without Salton Sea water surface elevation concern; 2) Maintain near constant salinity AND a Salton Sea water surface elevation not to exceed - 230 (not greater than 230-feet below Mean Sea Level); and, 3) Requires "most cost effective" solution. This means DWR will attempt to maintain: 1) Long-term stable aquatic shoreline habitat for historic biodiversity levels; 2) Eliminate air quality impacts due to restoration; and, 3) Protection of water quality. DWR should address the impacts of these tasks as related to the 5 objectives listed above.

DWR should more fully communicate with tribes in the watershed and more fully bring tribes in the process. DWR should provide information flow to tribes and communities.

DWR should fully describe existing water rights, land ownership and land status, and the DWR's ability to implement the alternatives across jurisdictions.

DWR should address, and analyze fully, wetlands issues, and recognize that wetlands are a significant part of the solution. DWR should develop alternatives that limit exposed seabed areas; encourage water-based solutions; and, have a plan to utilize exposed lands.

DWR should fully address how the State's Salton Sea restoration alternatives will maintain community health and economic development.

DWR should discuss and assess protection of tribes and communities in watershed in addressing Salton Sea Restoration issue in a watershed-wide solution. Local residents and groups should receive deference from the decision-makers.

DWR should fully describe cost estimates for each alternative for Salton Sea Restoration.

DWR should fully describe who is responsible for Salton Sea if a decision is made to take no action for restoration of Salton Sea.

DRW should fully describe a "no action" alternative and its impacts so that full disclosure is achieved.

DWR should solicit and utilize tribal and local community input into selection of alternatives.

DWR should select alternatives and mitigation that will protect cultural resources currently submerged by the present water body of the Salton Sea.

DWR should develop alternatives that retain economic development potential as part of restoration effort.

DWR should seek information from the Torres-Martinez Desert Cahuilla Indians because of direct impacts to the tribe. Alternatives should focus on provision of resources from local sources such as rock and fill available from the Tribe.

DWR will need to assess impacts to the human environment, economics, social issues, and the many

issues not to be addressed if restoration is only for QSA mitigation in the Salton Sea and for a project for ecosystem restoration (wildlife).

DWR should address whether or not any alternatives will include restoration to current conditions.

DWR should assess how humans will be impacted and what the impacts to humans will be in restoring the Salton Sea ecosystem for wildlife.

DWR should assess impacts to resources and assets held in trust by the U.S. Government for the sole use and benefit of the Tribe due to exposure of contaminated sediments on the lake-floor due to receding water level/shoreline. The preferred alternative should recognize that pollutant material in the exposed lake-bottom sediments that will degrade air quality need to be removed to preclude detrimental air quality issues. No action will result in roughly 80,000 acres to be exposed, assuming 500,000 AF/yr reduction in inflows to the water body due to QSA. The State must mitigate fugitive dust. At Owens Lake the cost is \$10-million/acre by LADWP in dollars and water. Salton Sea issue would be about ten times worse, since is already in non-attainment area. Selenium (and Arsenic and DDE) is concentrated in detritus in the lakebed in the upper basin of Salton Sea due to slower currents; whereas in lower basin, selenium remains as suspended particles in a slightly faster current. PM-10 enforcement could take care of most of the problems [there is no enforcement of these constituents in soils (unless there were to be new legislation for the Salton Sea Restoration)]. DWR should fully assess air contamination with respect to exposure of Salton Sea lake-bottom as water recedes and its impacts on Tribes and local communities.

DWR should discuss what the authorities of the CAL-FED Bay-Delta Authority regarding Indian Trust Assets apply for the DWR Salton Sea Restoration process. The Salton Sea is in the CAL-FED Solution Area. The three pieces of legislation for Salton Sea Restoration collectively do not say that CAL-FED doesn't apply. The protection of Indian trust assets applies to all CALFED actions that could have involve impacts on Indian trust assets. The Secretary, Resources Agency, decided this in the ROD and Certification for CALFED. State agencies should consult potentially affected Indian tribes or individuals; the BIA; the Solicitor's Office of the U.S. Department of the Interior; and the Native American Affairs Office.

DWR should assess impacts of MWD recharge in the upper Coachella Valley or possibly as recharge in the Lower Coachella Valley, in the option MWD may have to purchase water from DWR if DWR buys water from IID. DWR should address those impacts, as water pumped from the ground is used in agriculture, which becomes return flow to the Salton Sea with potential for significant water quality impacts upon restoration

DWR should assess impacts of DF&G/JPA for purchase of land from selling water to MWD purchased from IID. DWR should fully discuss and produce a flowchart describing all sources of potential funds for land purchases and for mitigation.

DWR should fully disclose impacts of mitigation projects on and around lands purchased with funds derived from water sales. DWR should fully discuss and produce a flowchart describing all sources of potential funds for land purchases and for mitigation.

DWR should assess the physical effect of restoration on surrounding communities.

DWR should assess the indirect impacts of each alternative including economic and recreation impacts. Legislation calls for restoring the Salton Sea ecosystem and permanent protection of wildlife dependent on the ecosystem (otherwise State would lose 800,000 AF/Yr to Southern California Coastal Plain (ie., in the MWD/SDCWA service areas). This is for ecosystem restoration, not economic development or recreation.

DWR should fully analyze public interest and public trust in its effort to California wildlife trust assets

- DWR should identify a series of projects for protecting the environment as a preferred alternative. Subsequent projects identified through the PEIR preferred alternative should be identified to be addressed under subsequent EIRs. Projects identified that would not be addressed under subsequent EIRs should be fully identified and analyzed in the DEIR if to be approved later under a Negative Declaration.

DWR should maintain consultation with Department of Fish and Game (DF&G) as CEQA Co-Lead, and Salton Sea Authority, Air Quality Management Districts, and the Secretary's Salton Sea Advisory Committee. The DWR should fully describe the Resources Secretary or DWR/DF&G efforts seeking partnerships and Memorandum of Understanding (MOU's) with other agencies, and the Secretary of the Interior, and other federal entities, for the PEIR, or potential joint CEQA/National Environmental Policy Act (NEPA) PEIR/Environmental Impact Statement(EIS).

DWR should evaluate the magnitude and practicality of construction and the operation and maintenance costs for each alternative. The economic analysis is the only restraint in a final plan to implement for Salton Sea restoration. DWR should address impacts in the case a decision is to not implement restoration of the Salton Sea based on the economic analysis following the PEIR.

The DWR should consider in its Programmatic evaluation all the categories of coverage needs under NEPA in case a federal role eventually becomes available.

The DWR should implement only an alternative that involves a very specific engineering feasibility study because of cost variations can make a huge difference in determining financial feasibility. The study should involve very close cost-estimating in unit cost approach.

The State needs to have the DHS perform a risk assessment for information on human health concerns including a pre-action baseline evaluation so impacts can be monitored after an Alternative is selected and implemented.

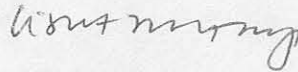
The BIA is very concerned with tribal trust resources, and is interested in seeing alternatives that address protection of Indian Trust, protection of tribal rights, and protection and enhancement of real property and natural resources trust assets. DWR should address and discuss how the CEQA process will responsibly

Page 5

address impacts to Indian land issues and concerns. (See letter dated to California Resources Agency Secretary Michael Crisman, dated March 2, 2004.)

For further information or discussion, please contact Richard R. Gundry, Agency Hydrologist, (909) 276-6624, Ext. 257, or Lisa Northrop, Natural Resources Officer, Ext 254.

Sincerely,



James J. Fletcher
Acting Superintendent

Enclosures

cc: (see enclosed Distribution List)

Distribution List (page 1 of 2)

The Honorable Dean Mike, Spokesperson
Twenty-Nine Palms Band of Mission Indians
46-200 Harrison Place
Coachella, CA 92236

The Honorable Raymond Torres, Chairman
Torres-Martinez Desert Cahuilla Indians
P. O. Box 1160
Thermal, CA 92274

The Honorable Maurice Lyons, Chairman
Morongo Band of Mission Indians
11581 Potrero Road
Banning, CA 92220

The Honorable John A. James, Chairman
Cabazon Band of Mission Indians
84-245 Indio Springs Drive
Indio, CA 92201

The Honorable Maryann Martin, Chairperson
Augustine Band of Mission Indians
P. O. Box 846
Coachella, CA 92236

The Honorable Richard Milanovich, Chairman
Agua Caliente Band of Cahuilla Indians
600 East Tahquitz Canyon Way
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Jeanine Jones, Principal Engineer
Colorado River and Salton Sea Office
California Department of Water Resources
P. O. Box 942836
Sacramento, CA 94236-0001

Michael Crisman, Secretary
California Resources Agency
P. O. Box 942836
Sacramento, CA 94236-0001

Distribution List (page 2 of 2)

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Clay Gregory, Regional Director
(Attn: Dale Morris, Natural Resources Officer)
Bureau of Indian Affairs, Pacific Region
2800 Cottage Way
Sacramento, CA 95825

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IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR

Natural Resources
FY 2004 Water

BUREAU OF INDIAN AFFAIRS
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MAR 2 - 2004

Michael Crisman, Secretary
California Resources Agency
P. O. Box 942836
Sacramento, CA 94236-0001

Dear Mr. Crisman:

The Bureau of Indian Affairs (BIA) holds legal title in trust for the land and natural resources of federally-recognized Indian Reservations in the Coachella Valley and has responsibilities to protect them. This responsibility is manifested as trust obligations and fiduciary responsibilities to protect real property and natural resources held in trust by the United States on behalf of federally-recognized tribes. This includes, but is not limited to, their accounts, land, natural resources, minerals, air, and water. Water resources include both surface-water and ground-water, and the quality and quantity of the water. There exists inherent water rights for Indian Reservations. BIA's chief charge is protection of these resources.

There are six Indian Reservations in the Salton Sea watershed affected by pending California decisions regarding restoration or rehabilitation of the Salton Sea:

Agua Caliente Indian Reservation
Cabazon Indian Reservation
Torres-Martinez Indian Reservation

Augustine Indian Reservation
Morongo Indian Reservation
Twenty-Nine Palms Indian Reservation

These six Indian Reservations comprise roughly 120,000-acres, of which nearly 12,000-acres of the Torres-Martinez Indian Reservation are overlain by the Salton Sea as it stands today. The trust lands encumbered by the Salton Sea are not managed by the Coachella Valley Water District and the Imperial Irrigation District who have easements that allow for overland flow of drainage water. Yet, these water districts do not control other land uses on the presently submerged trust land, or those that may emerge with a subsequent land cover.

Trust lands and tribes will be affected by forthcoming decisions of California regarding the Salton Sea. Depending on the outcome of plans for the Salton Sea restoration or rehabilitation, submerged lands and other trust lands will no doubt be effected by various changes in land use affecting the degrees of enjoyment of tribal rights, and for management of recovered land surfaces now

submerged. The BIA has a higher standard of care than that of other federal agencies, such as the National Forest Service, or Department of the Interior's Bureau of Land Management, National Park Service, and the Bureau of Reclamation, because of the BIA's fiduciary trust responsibilities to protect Tribal assets. For instance, the Bureau of Reclamation does not represent BIA's responsibilities and concerns about tribal rights.

It is imperative California provide for BIA and tribal participation in the decision-making process for restoration or rehabilitation of the Salton Sea. Perhaps there was an oversight made by California to not include the BIA and tribes. Accordingly, we request that California provide this Agency and tribes a decision-making level position involving each of these four functional areas:

1. Salton Sea Advisory Committee and decision-making of the Department of Water Resource's (DWR) Colorado River and Salton Sea Office, and the California Resources Agency.
2. Quantification Settlement Agreement environmental mitigation decision-making that involves the DWR-chaired Joint Powers Authority with the Imperial Irrigation District (IID), the Coachella Valley Water District, and the Metropolitan Water District of Southern California (MWD).
3. Salton Sea Restoration decision-making for implementation of methods/strategies for using the Salton Sea Fund for Salton Sea Restoration (to be managed by the California Department of Fish & Game).
4. Decision-making process for water to be deployed by MWD in its usage of water if purchased from DWR when DWR purchases Colorado River water from IID.

For further information or discussion, please contact Richard R. Gundry, Agency Hydrologist, (909) 276-6624, Ext. 257, or Lisa Northrop, Natural Resources Officer, Ext 254.

Sincerely,



James J. Fletcher
Superintendent

Enclosure

cc: See Distribution List (enclosed)

Letter dated Mar 2, 2004 to:
Michael Crisman, Secretary
California Resources Agency

Distribution List

The Honorable Dean Mike, Spokesperson
Twenty-Nine Palms Band of Mission Indians
46-200 Harrison Place
Coachella, CA 92236

The Honorable Raymond Torres, Chairman
Torres-Martinez Desert Cahuilla Indians
P. O. Box 1160
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P. O. Box 846
Coachella, CA 92236

The Honorable Richard Milanovich, Chairman
Agua Caliente Band of Cahuilla Indians
600 East Tahquitz Canyon Way
Palm Springs, CA 92262

Jeanine Jones, Principal Engineer
Colorado River and Salton Sea Office
California Department of Water Resources
P. O. Box 942836
Sacramento, CA 94236-0001

Clay Gregory, Acting Regional Director
Bureau of Indian Affairs, Pacific Region
2800 Cottage Way
Sacramento, CA 95825

Dale Morris, Natural Resources Officer
Bureau of Indian Affairs, Pacific Region
2800 Cottage Way
Sacramento, CA 95825



United States Department of the Interior



FISH AND WILDLIFE SERVICE

California/Nevada Operations Office
2800 Cottage Way, Suite W-2606
Sacramento, California 95825-1846

In Reply Refer To:

APR 14 2004

Mr. Charles Keene
California Department of Water Resources
770 Fairmont Avenue
Glendale, California 91203

Subject: Notice of Preparation (NOP) of a Programmatic Environmental Impact Report (PEIR)
for the Restoration of the Salton Sea Ecosystem and Preservation of its Fish and
Wildlife Resources

Dear Mr. Keene:

The Fish and Wildlife Service (Service) has reviewed the above-mentioned NOP and would like to offer the following comments for your consideration in the development of a draft PEIR. As you know, the Service has trust responsibilities for species listed under the Endangered Species Act of 1973 (ESA; as amended), migratory birds per the Migratory Bird Treaty Act of 1918 (as amended), and over 40,000 acres of land in the Sonny Bono Salton Sea National Wildlife Refuge. These trust resources need to be considered in the development of an approach for restoration of the Salton Sea ecosystem. Issues that may affect trust resources include such aspects as facility placement, water quality changes resulting from water conservation and/or restoration activities, and air quality impacts associated with the reduced elevation of the Salton Sea. This last is also a concern for Service personnel that live and work in the Salton Sea area.

A reasonable suite of restoration alternatives needs to be evaluated in the PEIR. Several whole-Sea alternatives have already undergone review; the Service agrees that a complete analysis of those alternatives does not need to be repeated in the PEIR (however, a summary of the previous analysis would facilitate review of and comparison with new alternatives). Multiple partial-Sea alternatives should be considered. Given the attention received by what has been called the "North Lake," "Salton Lake," and Mary Bono alternative, this alternative warrants consideration in the PEIR. The Service sees opportunities for wildlife habitat improvement in the conceptual design, but we recognize that there are other potential issues with water quality, air quality and refuge land use that have not been resolved. The PEIR also will need to consider the opposite partial-Sea alternative resulting in a "South Lake" configuration. One or more habitat enhancement alternatives that do not include dividing the Salton Sea should be included in the evaluation. As mentioned previously, all of these alternatives should address Service trust resources including the National Wildlife Refuge lands. Finally, the California Environmental Quality Act requires the consideration of a No Action alternative for comparison purposes.

Any wildlife enhancements will require adequate volumes of high quality water. The analysis should describe how such needs will be met in the long-term given the potential for additional volumes of water to be conserved and transferred out of the Imperial Valley in the future. This consideration should include maintaining adequate water supplies for the existing wildlife habitats managed by the Sonny Bono Salton Sea National Wildlife Refuge and the California Department of Fish and Game's Imperial Wildlife Area.

We appreciate the opportunity to provide these comments. Please feel free to contact our Refuge and/or Ecological Services staffs if we can be of any assistance. Chris Schoneman, Project Leader for the Sonny Bono Salton Sea National Wildlife Refuge, can be reached at (760) 348-5278. Carol Roberts, Salton Sea Coordinator for the Carlsbad Fish and Wildlife Office, can be reached at (760) 431-9440, ext. 271.

Sincerely,

Lawrence R. Gamble

Acting
Manager





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April 16, 2004

Charles Keene
California Department of Water Resources
770 Fairmont Avenue
Glendale, CA 91203

Subject: Scoping comments for the Restoration of the Salton Sea Ecosystem
and Preservation of Its Fish and Wildlife Resources, Riverside and
Imperial Counties, California

Dear Mr. Keene:

The U.S. Environmental Protection Agency (EPA) has reviewed the Notice of Preparation (NOP) published March 2004, requesting comments on the scope and content of the Programmatic Environmental Impact Report (PEIR) to be prepared by the California Department of Water Resources (DWR) and the California Department of Fish and Game (DFG) for the above project.

EPA has participated in the efforts to restore the Salton Sea since 1998. We provide advice on how to minimize potential air quality and water quality effects; work with the State in development of Total Maximum Daily Loads for selenium, nutrients and pesticides in the Salton Sea, New, Alamo and Whitewater Rivers and agricultural drains; manage the Special Acts appropriation grant awarded to the Salton Sea Authority in support of their Salton Sea Restoration Feasibility study; engage in the Salton Sea Authority's Science Subcommittee; and participate as an ex officio member of the Salton Sea Advisory Committee. EPA also has a Tribal Trust responsibility to work with the Tribes in protecting the environment on their lands.

Although the current restoration effort is a non-Federal action, we are providing comments on the NOP because restoration of the Salton Sea is interrelated with other Federal actions and environmental issues in which EPA is involved. Our goal is to ensure full disclosure of critical issues, proposed actions, and potential impacts; and to provide assistance in minimizing adverse environmental effects.

As stated in the NOP, Salton Sea restoration efforts have been underway since 1992 and are linked to many other State and Federal actions. We strongly urge DWR and DFG to evaluate the restoration feasibility study, restoration alternatives, scientific, and policy work completed by the Salton Sea Authority, U.S. Bureau of Reclamation, University of Redlands, Pacific Institute, and U.S. Filter, and integrate appropriate findings into the current restoration effort. A clear

description of the purpose and need, the project objectives, and their scope will be critical given the complexity, high visibility, and controversy surrounding the management of the Salton Sea.

Issues of interest to EPA include: (1) air quality impacts and mitigation/data collection options; (2) water resources; (3) consultation with Indian Tribes; (4) geographic scope and binational cooperation; (5) baseline environmental conditions; (6) alternatives analysis; and (7) cumulative impacts. Our comments on the Quantification Settlement Agreement, Imperial Irrigation District/San Diego County Water Authority Water Transfer, Bureau of Reclamation (BOR) Implementation Agreement, and BOR Salton Sea Restoration Project are incorporated by reference. If you would like a copy of these comments, please call Laura Fujii at (415) 972-3852.

We appreciate the opportunity to provide comments on the preparation of the PEIR, and look forward to continued participation in this process. When the Draft PEIR is released for public review, please send three copies to the address above (mail code: CMD-2). If you have any questions, please contact me or Laura Fujii, the lead reviewer for this project. Laura can be reached at 415-972-3852 or fujii.laura@epa.gov.

Sincerely,

Laura Fujii, Acting for

Lisa B. Hanf, Manager
Federal Activities Office
Cross Media Division

cc: Mike Walker, Bureau of Reclamation
James J. Fletcher, Bureau of Indian Affairs
Carol Roberts, US Fish and Wildlife Service
Charles Fisher, US International Boundary and Water Commission
Tom Kirk, Salton Sea Authority
Phil Gruenberg, RWQCB
Sylvia Oey, CARB
Bart Christensen, California EPA
Torres-Martinez Desert Cahuilla Indians
Twenty-Nine Palms Band of Mission Indians
Morongo Band of Mission Indians
Cabazon Band of Mission Indians
Augustine Band of Mission Indians
Agua Caliente Band of Cahuilla Indians

Air Quality

1. Implementation of the QSA could result in exposure of approximately 60,000 acres (94 square miles) of land currently inundated by the Salton Sea¹. The crust formed on exposed sediments may breakup under natural events similar to the Owens dry lake bed in California. These natural events could come from ground water evaporation, surface moisture, or rain. Human disturbances associated with off-road vehicle traffic (dune buggies, all-terrain vehicles, and dirt bikes) as well as hunting, fishing, boat launching activities and foot traffic could fracture the crust. These events can cause the surface to crack and, when exposed to wind, will contribute to particulate matter less than 10 microns in diameter (PM10) emissions. The Coachella Valley is classified under the Federal Clean Air Act as being a "serious" non-attainment area for PM10. Imperial County is classified as a "moderate" non-attainment area for PM10.

Recommendations:

The Programmatic Environmental Impact Report (PEIR) should determine the durability and sustainability of crust formations on the exposed Salton Sea shoreline, and address variations associated with weather patterns and human disturbance.

We recommend that the PEIR include a description of the composition of the sediments and the risk of adverse human health and environmental effects if this sediment becomes airborne. If specific data is not available, the PEIR should identify necessary research and data needs.

The PEIR should evaluate possible control measures for the newly exposed shoreline. Control measures could include, but are not limited to, the introduction of native plants to provide ground cover, use of conserved water to reduce emissions, and control of public access to certain areas of the shoreline.

A PM10 monitoring network should be established around the Salton Sea as soon as possible to determine baseline emissions and PM10 exceedances of the National Ambient Air Quality Standards (NAAQS) under the proposed project.

The development of a Salton Sea monitoring and mitigation plan should be coordinated with the South Coast Air Quality Management District and Imperial County Air Pollution Control District.

¹Wastewater Conveyance & Treatment Project for The Mexicali II Service Area
Environmental Assessment, Response to Comments, December 2003, US EPA.

2. The Draft PEIR should provide a detailed discussion of air quality standards, ambient conditions, and potential air quality impacts for the Salton Sea area. Cumulative and indirect impacts should be fully evaluated. For instance, development or modified use of surrounding lands (e.g., recreational development, retirement developments) could generate significant sources of PM10, smoke, and vehicle emissions.

Water Resources

Water Quality

The concentration of selenium in many locations of the New and Alamo Rivers and IID agricultural drains, exceeds EPA's aquatic life criteria of 5 micrograms per liter ($\mu\text{g/l}$) (Draft PEIR Colorado River Quantification Settlement Agreement (QSA), pgs. 3.1-10, 3.1-11; Table 3.1-15, pg. 3.1-29). In addition, we are concerned with the potential for increased concentrations of perchlorate, boron, nutrients, pesticides, sediments, metals, and total dissolved solids in surface waters. An increase in water temperatures is also a concern since it may have adverse effects on an already stressed biological system. Our concern is heightened by the presence of fish-eating migratory birds and other threatened and endangered fish and wildlife species that could be adversely affected by these harmful constituents, and by the bioaccumulation of selenium up the food chain.

Recommendations:

The PEIR should address the potential impacts of water temperature and constituent concentrations (e.g., perchlorate, boron, pesticides, nutrients, sediments, metals, and total dissolved solids) related to the reduced volume of drainage water flowing into the New, Alamo, and Whitewater Rivers and the Salton Sea. Many of these constituents, such as perchlorate, can have serious adverse effects on human health and the environment. The PEIR should also provide an evaluation of the cumulative effects of possible increased concentrations of these constituents of concern.

The PEIR should identify mitigation measures to address the potential adverse increase in concentration of constituents of concern such as selenium. Potential mitigation measures include biological and chemical selenium removal; integrated drainage management; desalination; evaporation ponds; deep well injection of extremely poor drainwater; and beneficial uses of drain water and salts.

The Regional Water Quality Control Board is developing Total Maximum Daily Loads (TMDLs) for selenium, nutrients and pesticides in the Salton Sea, New, Alamo and Whitewater Rivers and agricultural drains. We encourage DWR and DFG to work with the Regional Water Quality Control Board, EPA and local Indian tribes as they develop and implement TMDLs and other measures to address water quality problems. The PEIR should assess the conformity of

proposed restoration actions with probable TMDLs requirements and water quality goals.

Wetlands: Section 404 of the Clean Water Act (CWA)

1. The PEIR should identify impacts to water, floodplains, and wetlands, including identification of Section 404 Clean Water Act (CWA) requirements, and management and mitigation proposals to ensure compliance with these requirements.

EPA will review the proposed action for compliance with the Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the Clean Water Act (CWA). To comply with the Guidelines, the proposed actions must meet all of the following criteria:

- There is no practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem (40 CFR 230.10(a)).
 - The proposed action does not violate State water quality standards, toxic effluent standards, or jeopardize the continued existence of federally listed species or their critical habitat (40 CFR 230.10(b)).
 - The proposed action will not cause or contribute to significant degradation of waters of the United States, including wetlands (40 CFR 230.10(c)). Significant degradation includes loss of fish and wildlife habitat, including cumulative losses.
 - All appropriate and practicable steps are taken to minimize adverse impacts on the aquatic ecosystem (i.e., mitigation) (40 CFR 230.10(d)). This includes incorporation of all appropriate and practicable compensation measures for unavoidable losses to waters of the United States, including wetlands. The DEIS should fully address the feasibility of "in-kind" habitat mitigation measures.
2. As stated in the NOP, local agencies and environmental groups have constructed pilot wetlands along the New and Alamo Rivers.

Recommendation:

The PEIR should describe the constructed wetland project and evaluate the potential use of constructed wetland efforts to improve water quality and provide wildlife habitat. The possible tradeoff between the reduction of Salton Sea inflow due to increased wetland water use and habitat creation benefits should be evaluated.

Coordination with Indian Tribes

We strongly recommend DWR and DFG meet and work with potentially affected Indian Tribes. At a minimum, the following Indian Tribes should be notified and encouraged to participate in the planning process: Torres Martinez Desert Cahuilla Indians, Morongo Consortium of Coachella Valley Tribes, The Morongo Band of Mission Indians, Agua Caliente Band of Cahuilla Indians, Twenty Nine Palms Band of Mission Indians, Augustine Band of Mission Indians and the Cabazon Band of Mission Indians. Many of these Tribes have a direct interest in the water supply, water quality and water use in this region. For instance, the Torres Martinez are in the process of establishing Water Quality Standards for the Salton Sea watershed and the Morongo Consortium has received a Section 319 Clean Water Act pass-through grant via the State of California for water quality monitoring of the area, including the Salton Sea. It is important that potentially affected Indian Tribes be consulted on a government-to-government basis in regard to the potential effects of the proposed actions.

Geographic Scope and Binational Cooperation

In addition to the Salton Sea, the study area should include those water bodies that effect the Sea, including the New River, Alamo River, Whitewater River, San Felipe Creek, agricultural drains, the Colorado River, and the Colorado River Delta (Delta). We are pleased that the geographic scope of the project now includes the Lower Colorado River and Delta. The restoration of the Salton Sea should carefully consider the interrelationships among major water resources within the Lower Colorado River watershed.

We recommend DWR and DFG approach the International Boundary and Water Commission (IBWC) to seek opportunities for binational cooperation and coordination on potential Lower Colorado River and Delta restoration alternatives. As noted in the NOP, remediating conditions in the Colorado River Delta will require binational cooperation. The outcome of the restoration project would be much more positive if both Mexico and the United States collaborated from the beginning of the planning process.

Baseline Conditions

1. The PEIR should clearly describe the existing conditions and historical conditions from pre-flooding to pre-tilapia fish and post-tilapia fish introduction.
2. The PEIR should clearly state which baseline will be used to evaluate the potential impacts of the alternatives. It is possible to have different baselines depending on the project objective, resource, and issues being evaluated. However, the baseline should be clearly defined and scientifically credible. We recommend proposed baselines be reviewed by the Salton Sea Advisory Committee and other key affected parties.
3. The baseline evaluation should include a water budget for the Salton Sea, New River, Alamo River, and the Colorado River, including the Delta.

Alternatives Analysis

1. Specific alternative selection/screening criteria should be described in the PEIR. Provide the rationale for the elimination of alternatives not evaluated in detail. Below is a list of management and structural options from our previous scoping comments and other feasibility studies for restoration of the Salton Sea that could be considered.

Management Alternatives

- Water supply allocations
- Water transfers for water for the Salton Sea
- Non-point source pollution control
- Modified agricultural practices, such as reduction of fertilizer and pesticide use, crop modification, land retirement, drainage water treatment (e.g., wetlands), water conservation.
- Develop and implement a dynamic model for the Lower Colorado River Basin, including the Salton Sea, to mimic the natural cycle.
- Remediation/restoration projects in the Lower Colorado River and Delta

Structural Alternatives

- Dikes or causeways
- Export/import actions (e.g., pumping water in and out of the Sea)
- Impoundments and pump out
- Salt removal (e.g., evaporation ponds, enhanced evaporation systems)
- Wastewater treatment facility
- Desalination facility

2. We recommend an alternative be developed based upon a dynamic restoration and management model for the Lower Colorado River Basin which mimics the natural ecological cycle of the Salton Sea, Lower Colorado River, and Delta. Such an alternative could include some or all of the following features concurrently or in stages:
 - a) Periodic refreshment of the Salton Sea with fresh water to reduce the salinity range.
 - b) Delivery of Colorado River surplus or flood water to the Delta wetlands for restoration of native and migratory bird and other endemic species habitat.
 - c) Removal of tilapia species/reintroduction of Gulf of California fish species OR allowing the Salton Sea to reach a salinity in which the system is dominated by invertebrates.
 - d) Invertebrate (brine shrimp) harvesting.
 - e) On-farm management to reduce pesticide, nutrient and selenium inputs to the Salton Sea.
 - f) Restoration of riparian habitat along the New, Alamo, Whitewater Rivers and San Felipe Creek.
 - g) Restoration of halophyte-dominated wetlands around the Salton Sea shoreline.

A restoration and management scenario including these elements could reduce salinity and allow the system to change over time, thereby mimicking the natural cycle of the historical Salton Sea. It would also restore habitat over a larger area available to migratory birds along the Pacific Flyway. The costs associated with such an alternative may be lower than engineering solutions proposed thus far, and could be borne by different beneficiaries over time.

Cumulative Impacts

Given the many state and federal actions in the project area, it is important that the PEIR provide a thorough evaluation of potential cumulative impacts of the project. A cumulative impact is "...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." (40 CFR §1508.7). For instance, restoration of the Salton Sea could accelerate the agriculture to urban conversion which is already rapidly occurring along the Border. Other third party effects such as potential impacts on geothermal resources, Indian Tribes, and farm workers should be also be analyzed.



Water Resources Division
Western Region
345 Middlefield Road, MS 435
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April 9, 2004

TO: Charles Keene, California Department of Water Resources, Glendale CA
FROM: Theresa Presser *Theresa A. Presser*
U.S. Geological Survey, Water Resources Division, National Research Program,
Menlo Park, California
SUBJECT: Comments on Scope of Programmatic Environmental Impact Report for the
Restoration of the Salton Sea Ecosystem and Preservation of its Fish and Wildlife
Resources

See attached document that I prepared on 3/4/03 concerning issues of selenium toxicity in the Salton Sea and proposed restoration. This document was originally developed and submitted to the USGS Salton Sea Science Office for use in a workshop on "Selenium and the Salton Sea" held in Sacramento on March 11, 2003. I wish to resubmit these comments as part of the scoping effort for *Programmatic Environmental Impact Report for the Restoration of the Salton Sea Ecosystem and Preservation of its Fish and Wildlife Resources* (PEIR). Although the comments are somewhat detailed in terms of selenium biogeochemistry, particularly pertinent to the issue of scoping for the PEIR is the section *Need for a Selenium Component to Proposals* which states:

Without information concerning selenium as an environmental toxicant as part of the proposals, the basis for understanding the adverse impacts or benefits of a proposed solution would be incomplete. To this end, a separate Se component equal in status to that of salt and water needs to be developed for each proposed remediation effort. This ecological analysis should be as detailed as that of engineering and economics. Models (e.g., bird-use, Se pathway bioaccumulation) are available (see below) that can be integrated into the analysis to aid in the development of realistic loading and concentration scenarios and the forecasting of biological effects.

I appreciate the opportunity to comment on scoping for the Salton Sea Restoration. If you need further information or copies of referenced material, please do not hesitate to call (650-329-4512, tpresser@usgs.gov). You also may wish to contact USGS's representative on the Salton Sea Advisory Committee, Bernard Shanks at (206-220-4624, bernard_shanks@usgs.gov) or Doug Barnum at the Salton Sea Science Office (760-777-1564, douglas_barnum@usgs.gov) for additional information.

Attachment (1)

cc: Bernard Shanks, USGS, BRD, Seattle, WA
Doug Barnum, USGS, BRD, La Quinta, CA
Keith Kirk, USGS, WRD, Menlo Park, CA



Water Resources Division
Western Region
345 Middlefield Road, MS 435
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March 4, 2003

TO: Doug Barnum, USGS, BRD, Salton Sea Science Office, La Quinta, California
FROM: Theresa Presser
U.S. Geological Survey, Water Resources Division, National Research Program,
Menlo Park, California
SUBJECT: Technical Comments on Selenium Component of *US Filter Salton River
Desalination Solution Proposal* (Version dated 11/20/02) and *Draft Review of US
Filter Corporation Salton River Proposal* (containing *Variations #1 and #2*, 1/03)

Selenium (Se) loading to the Colorado River is approximately 81,000 pounds (lbs) Se/year (Engberg et al., 1999). Estimates of the annual mass loading of Se to the Salton Sea is approximately 17,600 lbs Se (Skorupa, 1998), an amount equal to that which caused the ecotoxicity at Kesterson (discharge 1981-1985, 17,400 lbs Se, Presser and Piper, 1998). Understanding the biotransfer of Se is essential to evaluating the impact of proposed changes in Se discharges to the Salton Sea and associated mitigation wetlands. The *US Filter Proposal* does not address the ecology, food webs, hydrodynamics, or Se biogeochemistry in the Salton Sea and proposed mitigation wetlands. Successful integration of these sciences with the current understanding of factors that affect the environmental fate of Se would help quantify the transfer of risk that is associated with Se management in proposed solutions. Presented below are general and specific comments that address the contaminant Se in proposed remediation. In addition, I include information that will help to provide a scientific conceptual basis for restoration, which I found lacking in the proposal materials.

General Comments

Recognize Se-impairment of Salton Sea and Constructed Wetlands

Lack of comprehensive historical and current data for the fate of Se in the Salton Sea ecosystem and its tributaries is a major problem. Skorupa (1998) gives a compilation of Se concentrations in water, sediment, food chain fauna, fish tissue, bird tissue, and bird eggs for the Salton Sea (see attached Table 1). If these data for Se concentrations in environmental media of the Salton Sea are used to rate the Salton Sea ecosystem based on the *Lemly Index* for Se hazard (Lemly, 1995 and 1996), the hazard score indicates a high hazard.

The Salton Sea (1 – 2 µg/L total recoverable Se in water) is currently posted because of Se with a health warning against consumption of fish (> 2 µg Se/g wet weight or 8 µg Se/g dry weight, filet). Selenium concentrations in fish muscle (see attached Table 2) also are above the dietary ecological risk threshold for aquatic life (> 7 µg Se/g, whole body; whole-body Se concentrations are usually greater than muscle Se concentrations). Concentrations of Se in grebe

liver samples and egg samples (see attached Table 3) from the Salton Sea can be within the range of toxicity for acute effects and are within the range at which sub-acute effects occur (e.g., suppression of the immune system).

Effects are likely to occur at the proposed levels for mitigation wetlands (7-10 $\mu\text{g Se/L}$) based on the current USEPA criterion for the protection of aquatic life (5 $\mu\text{g Se/L}$) and on current research on Se exposure. Use of large-scale biological treatment technologies (e.g. wetlands or evaporation ponds) has generated serious ecological problems and hazardous Se wastes for disposal (Luoma and Presser, 2000; Presser and Piper, 1998; Skorupa, 1998a; Hamilton, 2000b). Further, Tulare Basin evaporation basins are regulated by the state and clean wetlands are required to mitigate for unavoidable toxic impacts to breeding waterbirds (Skorupa, 1998). The mitigation wetlands are not allowed to average more than 2.7 $\mu\text{g/L}$ total recoverable Se in impounded water (Central Valley Regional Water Quality Control Board, 1993).

Vulnerable downstream water bodies should be considered when evaluating upstream source waters. Selenium impacts may not appear equally in all components of an ecosystem because some components may be more sensitive than others. Selenium-contaminated impoundments appear to present greater risks to wildlife than Se contaminated streams and rivers (Seiler, 1995; Skorupa, 1998). For example, a flowing system may be less sensitive to Se effects where selenate dominates, than adjacent backwaters or wetlands, where residence times and biogeochemical transformations of Se are more likely. As noted below, treatment could affect the speciation of Se, producing a more bio-available form of Se in downstream ecosystems (Amweg, et al., 2003).

Need for Protective Criteria Based on Food Webs

It seems clear from current research that significant scientific advances in regulation and technology are needed to control environmental Se concentrations within environmentally protective ranges to avoid adverse impacts from Se. It is now known that direct transfer of Se from solution to animals is a small proportion of exposures. Bioaccumulation and uptake via food is the most important route of Se transfer to upper trophic level species. For example, Se concentrations were well below water-quality guidelines for the protection of aquatic life in the San Francisco Bay-Delta Estuary (Bay-Delta) in the latest surveys in 1996. Nevertheless, Se in food webs was sufficient to be a threat to some species and a concern to human health if those species were consumed. Cases such as this prompted the U.S. Environmental Protection Agency to re-evaluate Se standards for the protection of aquatic life to include diet and vulnerable species (USEPA, 1998). The U.S. Fish and Wildlife Service and the National Marine Fisheries Service through the California Toxics Rule also are asking for more stringent Se criteria than the current national criteria. Hence, consideration should be given to elevated Se concentrations currently occurring in the fish and birds of the Salton Sea, even though waterborne concentrations in the sea are between 1 and 2 $\mu\text{g Se/L}$ (i.e., less than the current 5- $\mu\text{g Se/L}$ USEPA criterion for the protection of aquatic life).

Recognize Treatment is Problematic

Treatment technologies for Se have utilized both chemical and biological processes to remove Se from the water column, but with little operational success or cost-effectiveness (San Joaquin Valley Drainage Program, 1990a; Hanna et al., 1990; San Joaquin Valley Drainage Implementation Program, 1998; 1999a). Selenium removal is further hampered by the failure of traditional chemical methods to reduce Se to levels acceptable for remediation and, in arid

regions, by the problem of disposal of associated salts (San Joaquin Valley Drainage Program, 1990a). Remediation has not been established other than that dependent on dilution in a larger body of water (San Joaquin Valley Drainage Implementation Program, 1998; U.S. Department of the Interior's National Irrigation Water Quality Program, 2000).

Treatment also may be important in determining Se-load impacts. Treatment technologies applied to source waters may affect both the Se concentration and Se speciation of the effluent. For example, a treatment process could decrease the concentration of Se in the influent, but result in enhanced Se food chain concentrations if speciation in the effluent changes to increase the efficiency of uptake (Amweg, et al., 2003).

Need for a Selenium Component to Proposals

Without information concerning selenium as an environmental toxicant as part of the proposals, the basis for understanding the adverse impacts or benefits of a proposed solution would be incomplete. To this end, a separate Se component equal in status to that of salt and water needs to be developed for each proposed remediation effort. This ecological analysis should be as detailed as that of engineering and economics. Models (e.g., bird-use, Se pathway bioaccumulation) are available (see below) that can be integrated into the analysis to aid in the development of realistic loading and concentration scenarios and the forecasting of biological effects.

Need for a Se Budget—Mass Balance Approach

In general, the fundamentals of food chain exposure, ecology, hydrodynamics, and the biogeochemistry of Se need to be integrated into proposals to provide consistent linkages of major processes leading from Se loading through consumer organisms to predators to protect fish and wildlife. Hence, recognition and monitoring of Se loading to the Salton Sea ecosystem on a mass balance basis (i.e., inputs; fluxes and storage within environmental media; and outputs, Presser and Piper, 1998) are essential to evaluating how to control Se concentrations within environmentally protective ranges. Monitoring plan components necessary for a mass balance approach include source loads of Se; concentrations of dissolved Se and suspended Se; Se speciation in water and sediment; assimilation capacities of indicator food chain organisms; and Se concentrations in tissues of prey and predator species. A linked or combined approach would include all considerations that cause systems to respond differently to Se contamination and would relate to source control limits.

Modeling of Biological Effects and Planning for Bird-Use

The USGS has recently published a Se bioaccumulation model specific to the ecosystem of the San Francisco Bay-Delta Estuary (Luoma and Presser, 2000; available on the web: <http://pubs.water.usgs.gov/ofr00-416/>). Summary pages also are available on the web: http://sfbay.wr.usgs.gov/access/bioavail/no_bay/. The fundamentals of the model are applicable to modeling effects of Se on other ecosystems. This pathway bioaccumulation model represents a new tool to predict ecological effects. Demand-driven Se loads as well as supply-driven management scenarios can be considered.

Specific protocols that include feeding relations and life cycles of vulnerable predators including migratory and mobile species also should be a part of the modeling effort. Bird-use models also are available as a result of planning for mitigation for the Tulare Basin evaporation ponds (U.S. Fish and Wildlife Service, 1995a, b; <http://sacramento.fws.gov/ec/evaporation>

_ponds.htm).

Bioavailability

In the Bay-Delta Se Model, we concluded that credible protective Se criteria should be based on 1) contaminant concentrations in sources that most influence bioavailability and 2) concentrations in media and organisms relevant to vulnerable food webs (Luoma et al., 1992; Luoma and Presser, 2000). As noted above, critical media are water, particulate material, and tissue of prey and predators. Existing criteria for these media could be used in-combination to evaluate risk or hazard (Lemly, 1995; USDOJ, 1998).

The *US Filter Proposal* does not address Se bioavailability in any of the proposed aquatic systems. The *Tetra Tech* review of this proposal and the review of the *Pacific Institute Proposal* state that "Most selenium entering the present Sea is possibly entombed in the deeper sediments where it is minimally available to the biota". This statement is misleading and not based on data analysis. Data are needed to substantiate this statement (i.e., Se concentrations and speciation in suspended material and identification of food webs). Entombment of Se in deeper sediments does not necessarily equate to unavailable Se. Availability depends on food webs and sensitivity of species to Se (Luoma et al., 1992). Differences in speciation, transformation to particulate form(s), speciation on particulates and invertebrate bioaccumulation all influence how waterborne Se is transferred to a predator. These processes are affected by the nature of the source and the environmental conditions in receiving waters (e.g. Se in agricultural drainage water can be a different form than the Se in treated sources; Se discharged to a freshwater wetland is transformed differently than Se discharged to an estuarine water column). Physical processes like hydraulic residence time are also important. Particulate transformation of Se in a river may occur far downstream from the source of input; while transformations in a wetland or an estuary with a long residence time may occur near the input. Biological processes that affect exposure of predators include differences among predator species in feeding, behavior, and physiology.

As noted in the *Tetra Tech* review, resuspension is a possibility. A change in water-column dynamics and chemistry as proposed could well reverse uptake phenomena. Recycling of Se within a surficial biologically active layer of the Salton Sea may be an important part of current conditions affecting Se transport in the sea. Given the bioreactive nature of Se, the food webs of the current limited ecosystem of the Salton Sea (i.e., overwhelmingly dominated by introduced species having broad environmental tolerances) could be a result of past Se bioaccumulation, cycling, and toxicity effects.

Specific Comments (on *US Filter Proposal* and *Tetra Tech* review of 1/03 which contains *Variations 1 and 2*)

Based on available limited Se data, I agree with most of what was written on Se contamination in the review of *Pacific Institute Proposal* by the Salton Sea Science Office (see exception above on bioavailability). The more in-depth version given on pages 28-29 should be added to the *US Filter Proposal* review. The synopsis in the *Tetra Tech* review is too short (page 59). A rebuttal of *Benefits* of the proposed remediation similar to that given in the *Pacific Institute Proposal* (page 33) should be developed for the *US Filter Proposal*.

Providing mitigation habitat for migratory birds is crucial to the success of any proposal for the Salton Sea. All three of the approaches described in the *Tetra Tech* review of the *US Filter Proposal* (*US Filter Proposal* and *Variations 1 and 2*) are problematic because of potential

impacts of Se on fish, wildlife, and aquatic resources. The *US Filter Proposal* is the most problematic in terms of Se because it creates an agricultural drain (Salton River) surrounding a dying Salton Sea that would receive seleniferous by-products from desalination. The agricultural drain (i.e., the shoreline impoundment fed by agricultural drainage) is proposed as wetland habitat. As part of this proposal, good-quality desalinated water would be sold and used outside the project area. In terms of Se, Se concentrations could increase in the Salton Sea (through evaporation) and the Salton River (receiving more concentrated agricultural drainage).

Variations 1 and 2 are improvements in that they propose 1) returning some portion of treated water to the project area for mitigation of ecological effects and 2) separate Se treatment. For all three approaches, a Se budget (including Se in water, sediment, and biota) would quantify potential changes in Se concentration in the proposed diminished marine areas, constructed wetlands, and impoundments. This budget also would include by-products such as reject water or solid salts from desalination. In addition to providing understanding of processes, the Se budget could identify options for splitting agricultural and desalination waste-streams to achieve benefits for bird habitat within the basin. In terms of Se concentrations and loads, a third variation could be developed that incorporates use of the desalinated water (not just reject water) for aquatic habitat, ensuring adequate mitigation for what appears to be unavoidable bird losses.

Thank you for asking for my input on identifying significant Se issues related to these proposals in connection with remediation of the Salton Sea. If you have any questions or if I can be of further assistance, please do not hesitate to call (Theresa Presser, 650-329-4512, tpresser@usgs.gov)

Attached: Tables 1- 3
References

TABLE 1. Environmental media
(Compilation of data for Salton Sea from Skorupa, 1998)

Water source ($\mu\text{g Se/L}$) (selenate)	2-10	
Water system ($\mu\text{g Se/L}$)	1.5	
Sediment ($\mu\text{g Se/g}$, dry weight)	3.3	
Food chain fauna ($\mu\text{g Se/g}$, dry weight)	0.8-12.1	
Fish ($\mu\text{g Se/g}$, dry weight)		
Whole-body	6.1-16	
Muscle	7.9-14	
Bird ($\mu\text{g Se/g}$, dry weight)		
Eggs	1.6-35	5% reduction of black-necked stilt nesting proficiency
Muscle	2.7-7.2	
hepatic	2.7-42	

TABLE 2. Fish (From *Analyses of organic and inorganic contaminants in Salton Sea fish* March 8, 2002 Revised Final Report to the California State Parks, Costa-Pierce et al., 2001)*

Fish muscle (filet)	µg Se/g, wet weight	µg Se/g, wet weight	µg Se/g, dry weight @ 75% moisture	µg Se/g, dry weight @ 75% moisture
Mean (± standard deviation)	Mouths of Alamo and New Rivers	Salton Sea near-shore	River Mouths	Salton Sea
	N = 2	N = 3	N = 2	N = 3
croaker (<i>Bairdiella chrysoura</i>)	2.10 ± 0.12	2.32 ± 0.56	8.4	9.3
	N = 2	N = 2	N = 2	N = 2
orangemouth corvina (<i>Cynoscion xanthulus</i>)	2.73 ± 0.07	2.30 ± 0.00	10.9	9.2
	N = 2	N = 3	N = 2	N = 3
hybrid tilapia (<i>Oreochromis spp</i>)	1.89 ± 0.61	2.39 ± 0.11	7.6	9.6
Consumption guideline (muscle, filet)				
2 µg Se/g, wet weight or approximately 8 µg Se/g, dry weight at 75% moisture				
Dietary Ecological guidelines				
	Low Risk < 3 µg Se/g, dry weight	Marginal Risk 3 - 7 µg Se/g, dry weight	Substantive Risk > 7 µg Se/g, dry weight	
Toxicity to fish (tissue, whole body)				
	Low Risk < 4 µg Se/g, dry weight	Marginal Risk 4 - 6 µg Se/g, dry weight	Substantive Risk > 6 µg Se/g, dry weight	

* date not given for fish collection

TABLE 3. Avian (From Tonie Rocke, National Wildlife Health Center, Madison WI:
email to T. Presser, 3/25/02 concerning bird data for Salton Sea)*

Bird liver	$\mu\text{g Se/g, dry weight}$	$\mu\text{g Se/g, dry weight}$	$\mu\text{g Se/g, dry weight}$	$\mu\text{g Se/g, dry weight}$
Geometric mean	north Salton Sea	south Salton Sea	Salton Sea	control
grebe	27	30	--	15
ruddy ducks	--	--	12	--
Thresholds for Se effects in birds (liver, $\mu\text{g Se/g, dry weight}$)				
	14 - 19 embryo deformity	23 - 32 terata	> 30 reproductive impairment; juvenile and adult toxicity	
	Heinz et al., 1989; Heinz, 1996	Lemly 1998	Skorupa, 1998	

*Samples collected in 1992.

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TORRES MARTINEZ
RESERVATION



MAU-WAL-MAH
SU-KUTT MENYIL

THE TORRES MARTINEZ DESERT CAHUILLA

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April 12, 2004

Charles Keene
California Department of Water Resources
770 Fairmont Avenue
Glendale, CA 91203

Re: NOP of PEIR for Salton Sea Ecosystem Restoration.

Dear Mr. Keene:

The Torres Martinez Tribe submits the following comments on the "Notice of Preparation of a Programmatic Environmental Impact Report (PEIR) for the Restoration of the Salton Sea Ecosystem and Preservation of it's fish and wildlife resources.

1. The Torres Martinez Desert Cahuilla Indian Reservation is Tribal Trust Land and federal legislation mandates that the State of California has no jurisdiction over said lands. And being that the Tribe is the largest individual landowner under and surrounding the Salton Sea (10,000 acres and 12,000 acres respectively), the tribal members and or residents of Torres Martinez (population @11,000) need to be assured that any project that is implemented will guarantee that they will be able to live on the land for several generations to come.

2. We, the Tribe, feel that the NOP raises concerns that the California Department of Water Resources and the California Department of Fish and Game (the lead agencies) plan to draft a PEIR based upon a very narrow interpretation of the state's implementing legislation. We encourage the lead agencies to select a feasible alternative that accommodates fish and wildlife, rigorously monitors air quality, and considers recreational and economic development opportunities that could be implemented by other state or local agencies. Although these issues are beyond the authority of the lead agencies, other state and local agencies, including the Salton Sea Authority, have a clear interest in promoting and incorporating appropriate recreational and

economic development elements into Salton Sea ecosystem restoration alternatives. Incorporating these elements into the project design, rather than forcing the other agencies to adjust their plans after the project has been selected, will generate a more robust plan that can enjoy broader public support. The legislature may then choose to fund these project elements from various sources, but at least will have the benefits of a more comprehensive plan.

3. Before the agencies begin the NOP or the Project, there is still a need to define more specific objectives for this project beyond the general ones set forth by the Legislature. As is, the NOP fails to provide specific Restoration Plan goals/objectives necessary to ascertain the quality of the range of alternatives. In random sequence, the following list goals and objectives that should be addressed in each alternative presented:

- The Plan should be sensitive to the culturally significant issues that are yet to be identified by the Torres Martinez Tribe. The Tribes' Traditional Ancestral Territory has long been associated with the Ancient Lake Cahuilla (Salton Sea). The water that filled the Salton Basin, approximately seven to eight times throughout the lifetime of Ancient Lake Cahuilla, provide a unique element to the desert. The environment consists of a variety of plants, animals, fish and birds that could not exist in the desert without the lake. There are many areas located along the shoreline, mostly on the Westside of the Salton Sea, that can be linked to the Tribe. Areas that consist of Natural Features, Landscapes, Traditional Properties, Sacred Sites, and Historic Sites must be preserved. A majority of these areas are significant to tribal heritage and thus have sustained values, character, or cultural importance. To insure the protection and preservation of our tribal heritage, for the cultural stability of present and future generations, it is important that our Tribe retain and rediscover as much of our cultural heritage as possible, protecting whatever might remain within the territory defined as the Tribe's Traditional Ancestral Territory.
- Any Restoration Plan must address water quality issues at the Sea and in its tributaries, and should build upon current TMDL efforts. Huge efforts have been ongoing for the last 5 years to set new updated TMDL's in both the Imperial and Coachella Valleys. These efforts should not be undermined by a project not designed to meet water quality criteria. And because Coachella is considered a service area for the CAL-FED project, the Plan will need to consider the effects of water transfers on the Salton Sea.
- A Restoration Plan must ensure that the Salton Sea ecosystem continues to support the diversity and comparable size of bird populations and to improve conditions for acknowledged endangered species, all while continuing to support a thriving and sustainable fishery and providing exceptional recreational opportunities (i.e., birding, hunting, and fishing).
- Furthermore, The Plan should attempt to leverage opportunities for providing economic stability for the communities in the Salton Sea ecosystem thus consistent with support for a thriving agricultural economy in the Imperial and Coachella Valleys.
- Any Plan should strive to improve air quality in the Imperial and Coachella Valleys, and minimize any emissions of harmful particulates from exposed lakebed. The air quality in the Salton Sea area already violates national and state ambient air quality standards. Torres

Martinez' own 10,000 acres of potentially exposed Sea Bed would undoubtedly pose a insurmountable hazard to all life forms in the area. The exposure of additional lakebed due to decreased inflows to the Sea will very likely exacerbate current conditions. One of the objectives noted in the NOP is "Elimination of air quality impacts from restoration projects." The lead agencies should read this objective broadly and not act only to mitigate direct air quality impacts arising from project construction. Thus we urge the lead agencies to work proactively with the Torres Martinez Tribal Air Quality Department, the Air Resources Board and the local air quality districts, to address the current and likely future air quality problems in the project area prior to the final project selection. By working cooperatively now rather than later, data can be generated through the development of air quality monitoring stations, and conducting on-site emissions tests for exposed lakebed. The gathering of information coordinated with all parties will provide better conditions for decision making with regard to health and human exposure prior to a final decision of any alternative.

4. The NOP notice remains vague on what will be the process for this project. DWR and DFG need to set forth a more specific plan for how the PEIR will be prepared in conjunction with the State Advisory Committee and how affected local constituencies will be able to provide input throughout the process. Given the magnitude of this project, the agencies should be designing a PEIR process that provides maximum public input. In this vein, Torres Martinez, as sovereign nation, requires that a consultation process be initiated in matters pertaining to the Tribes' reservation territory and or jurisdictional issues.
5. On behalf of our neighbors who also live at the Salton Sea and were not able to make the drive or were not properly notified to give comment upon the public scoping as is addressed in CEQA Guidelines, we would encourage the State of California Department of Water Resources to conduct additional scoping workshops in both Coachella and Imperial Counties on or around the Salton Sea in their communities -- not 60 or 500 miles away.
6. Torres Martinez is strongly against any Restoration Plan that would take funds that have been targeted for the Salton Sea to be used in another location. We feel that the money should be used at the Sea to leverage additional funding from Federal Entities to promote a Plan that would work to promote the Salton Sea. Additionally it is not reasonable to assume no other funds would be available from state bond funds once a Plan has been identified and accepted.
7. Additionally, Torres Martinez cannot support the use of funds to promote activities that would take away from Salton Sea Area (site-specific) Restoration activities only to be used by the Lower Colorado River Multi-Species Conservation Program.
8. We urge the lead agencies to comply with NEPA compliance as much as possible in conjunction with CEQA. Additionally, we would like to see the creation of an EIR for a project-specific environmental analysis rather than a PEIR. The Salton Sea has been studied for years and it's now time to begin a project. With proposed water transfers close at hand, pushing a project back three years will be too late to implement a viable project. Also consider the impact of Mexico's proposal to keep the water in their territory for use at power plants and water treatment facilities.

9. Finally, the Tribe would encourage our state legislators who drafted these bills into law to make the changes via new legislation to include the Salton Sea Authority -- to make the SSA a co-lead agency to promote and include into the project Plan its' ideas and data already generated.

Sincerely,

A handwritten signature in dark ink, appearing to read "Raymond Torres". The signature is fluid and cursive, with the first name "Raymond" written in a larger, more prominent script than the last name "Torres".

Raymond Torres
Chairman

RT/dl